Hyperthermic Cancer Treatment

LOB(s):	State(s):
☒ *Commercial* ☒ *Medicare*	☒ *Idaho* ☒ *Montana* ☒ *Oregon* ☒ *Washington* ☐ *Other:*
☒ *Medicaid*	☒ *Oregon* ☐ *Washington*

Enterprise Policy

PacificSource is committed to assessing and applying current regulatory standards, widely used treatment guidelines, and evidenced-based clinical literature when developing clinical criteria for coverage determination. Each policy contains a list of sources (references) that serves as the summary of evidence used in the development and adoption of the criteria. The evidence was considered to ensure the criteria provide clinical benefits that promote patient safety and/or access to appropriate care. Each clinical policy is reviewed, updated as needed, and readopted, at least annually, to reflect changes in regulation, new evidence, and advancements in healthcare.

Clinical Guidelines are written when necessary to provide guidance to providers and members in order to outline and clarify coverage criteria in accordance with the terms of the Member's policy. This Clinical Guideline only applies to PacificSource Health Plans, PacificSource Community Health Plans, and PacificSource Community Solutions in Idaho, Montana, Oregon, and Washington. Because of the changing nature of medicine, this list is subject to revision and update without notice. This document is designed for informational purposes only and is not an authorization or contract. Coverage determinations are made on a case-by-case basis and subject to the terms, conditions, limitations, and exclusions of the Member's policy. Member policies differ in benefits and to the extent a conflict exists between the Clinical Guideline and the Member's policy, the Member's policy language shall control. Clinical Guidelines do not constitute medical advice nor guarantee coverage.

Background

The goal of hyperthermia in cancer therapy is to produce tumor tissue temperatures above 41 to 42 degrees centigrade. Above this temperature, heat has a direct cytotoxic effect on both normal and tumor cells. Heat can also potentiate the cytotoxic effect of a variety of chemotherapeutic agents. Local hyperthermia confines the treatment to a small area, such as a tumor whereas regional hyperthermia treats large areas of tissue, such as a body cavity or organ.

Local hyperthermia has been shown to potentiate the effect of radiation therapy in the treatment of superficial lesions (less than 3 cm in depth).

Hyperthermic Intraperitoneal Chemotherapy (HIPEC) is a highly concentrated, heated chemotherapy treatment delivered directly into the peritoneal space to treat microscopic tumors on the peritoneal lining and/or outer surfaces of affected organs to eliminate tumor cells that have disseminated. It is indicated as an adjunct to cytoreductive surgery for gastrointestinal, appendiceal, ovarian, or mesothelial cancers.

Criteria

Commercial

Prior authorization is required

I. PacificSource considers Hyperthermic Intraperitoneal Chemotherapy medically necessary when used at time of or after cytoreductive (debulking) surgery for any of the following:

- **A.** Malignant peritoneal mesothelioma with metastasis limited to the abdominal cavity
- **B.** Peritoneal carcinomatosis from gastric cancer (e.g., Appendix, Colon, Rectal, Pancreatic and Gastric Cancers) without extra-abdominal metastases
- **C.** Pseudomyxoma Peritonei
- **D.** Stage II or Stage III epithelial ovarian cancer

II. PacificSource considers Local or Regional Hyperthermia cancer treatment to be medically necessary when **ANY** of the below criteria is met:

- **A.** Regional hyperthermic melphalan perfusion treatment in members with stage II, IIIA, and stage III in-transit extremity melanoma
- **B.** Other Local or Regional external hyperthermia treatment when **ALL** of the following is met:
  - **a.** In conjunction with radiation therapy as part of treatment plan
  - **b.** Diagnosis of primary or metastatic cutaneous or subcutaneous superficial malignancies (e.g., superficial recurrent melanoma, cervical lymph node metastases)

Medicaid

PacificSource Community Solutions follows the hierarchical process detailed in the "Clinical Criteria Used in UM Decisions" policy when determining coverage for Hyperthermia for treatment of cancer. PCS evaluates services based on the relevant coverage guidelines, limitations, and restrictions specified in the OHP Prioritized List of Health Services and its guidelines, as well as any applicable Oregon Administrative Rules (OARs).

PacificSource follows the “Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)” criteria for members under 21 and Young Adults with Special Health Care Needs (YSHCN).

PCS follows the “Unlisted and Unspecified Procedure Codes” policy for requests for unlisted codes.

Medicare

PacificSource Medicare follows National Coverage Determination (NCD) 110.1 Hyperthermia for treatment of cancer.

Experimental/Investigational/Unproven

PacificSource considers Hyperthermic Intraperitoneal Chemotherapy to be experimental, investigational, or unproven for any other indications.

PacificSource considers Whole Body Hyperthermia to be experimental, investigational, or unproven for any indication. (e.g., warm-water blankets, inductive coils (like those in electric blankets) or thermal chambers (similar to large incubators).

Coding Information

The following list of codes are for informational purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

77600 Hyperthermia, Externally Generated; Superficial

77605 Hyperthermia, Externally Generated; Deep

77610 Hyperthermia Generated, Interstitial Probe(S); Up To 5 Interstitial Applicators

77615 Hyperthermia Generated, Interstitial Probe(S); > 5 Interstitial Applicators

77620 Hyperthermia Generated, Intracavitary Probe(S)

96446 Chemotherapy administration into the peritoneal cavity via indwelling port or catheter

96547 Intraoperative hyperthermic intraperitoneal chemotherapy (HIPEC) procedure, including separate incision(s) and closure, when performed; first 60 minutes (List separately in addition to code for primary procedure)

96548 Intraoperative hyperthermic intraperitoneal chemotherapy (HIPEC) procedure, including separate incision(s) and closure, when performed; each additional 30 minutes (List separately in addition to code for primary procedure)

96549 Unlisted chemotherapy procedure

CPT® codes, descriptions and materials are copyrighted by the American Medical Association (AMA).

Definitions

Appendiceal Cancer - rare form of cancer (e.g., Neuroendocrine tumor, Appendiceal mucoceles, Colonic-type adenocarcinoma, Signet-ring cell adenocarcinoma and Goblet cell carcinomas/Adenoneuroendocrines) that initially develop as tumors in the appendix and can potentially spread into to the abdominal cavity.

In-transit melanoma represents a distinct disease pattern whereby the disease recurs as dermal or subcutaneous nodules between the primary melanoma site and the regional lymph node basin.

Malignant Peritoneal Mesothelioma - a rare, highly lethal malignancy of the serosal membranes of the pleura, peritoneum, pericardium, or tunica vaginalis testes. The peritoneum is the second most frequent site of origin of mesothelioma, following the pleura. The pathogenesis of all forms of mesothelioma is strongly associated with industrial pollutants, of which asbestos is the principal carcinogen associated with the disease.

Pseudomyxoma Peritonei - progressive accumulation of mucus-secreting (mucinous) tumor cells within the abdomen and pelvis. The most common sites of origin of the tumor are the appendix and ovary. The degree of malignant potential is variable; about 50% of patients live 5 years. Seventy-five percent of patients with Pseudomyxoma Peritonei are women between 45 and 75 years of age.

Stage III Ovarian Cancer - cancer in one or both ovaries and has either spread beyond the pelvis to the lining of the abdomen or to the lymph nodes in the back of the abdomen.

References

Armstrong, D. K., Alvarez, R. D., Backes, F. J., Bakkum-Gamez, J. N., Barroilhet, L., Behbakht, K., Berchuck, A., Chen, L. M., Chitiyo, V. C., Cristea, M., DeRosa, M., Eisenhauer, E. L., Gershenson, D. M., Gray, H. J., Grisham, R., Hakam, A., Jain, A., Karam, A., Konecny, G. E., Leath, C. A., III, … Hang, L. (2022). NCCN Guidelines® Insights: Ovarian Cancer, Version 3.2022. Journal of the National Comprehensive Cancer Network : JNCCN, 20(9), 972–980. https://pubmed.ncbi.nlm.nih.gov/36075393/

Basal cell carcinoma. American Academy of Dermatology. (2023). https://www.aad.org/member/clinical-quality/guidelines/bcc

Benson, A. B., Venook, A. P., Al-Hawary, M. M., Arain, M. A., Chen, Y. J., Ciombor, K. K., Cohen, S., Cooper, H. S., Deming, D., Farkas, L., Garrido-Laguna, I., Grem, J. L., Gunn, A., Hecht, J. R., Hoffe, S., Hubbard, J., Hunt, S., Johung, K. L., Kirilcuk, N., Krishnamurthi, S., … Gurski, L. A. (2021). Colon Cancer, Version 2.2021, NCCN Clinical Practice Guidelines in Oncology. Journal of the National Comprehensive Cancer Network : JNCCN, 19(3), 329–359. https://jnccn.org/view/journals/jnccn/19/3/article-p329.xml

Borzillo, V., & Muto, P. (2021). Radiotherapy in the Treatment of Subcutaneous Melanoma. Cancers, 13(22), 5859. https://doi.org/10.3390/cancers13225859

Cardi, M., Sammartino, P., Mingarelli, V., Sibio, S., Accarpio, F., Biacchi, D., Musio, D., Sollazzo, B., & Di Giorgio, A. (2015). Cytoreduction and HIPEC in the treatment of "unconventional" secondary peritoneal carcinomatosis. World journal of surgical oncology, 13, 305.https://doi.org/10.1186/s12957-015-0703-6

Coit, D. G., Andtbacka, R., Anker, C. J., Bichakjian, C. K., Carson, W. E., 3rd, Daud, A., Dimaio, D., Fleming, M. D., Guild, V., Halpern, A. C., Hodi, F. S., Jr, Kelley, M. C., Khushalani, N. I., Kudchadkar, R. R., Lange, J. R., Lind, A., Martini, M. C., Olszanski, A. J., Pruitt, S. K., Ross, M. I., … National Comprehensive Cancer Network (NCCN) (2013). Melanoma, version 2.2013: featured updates to the NCCN guidelines. Journal of the National Comprehensive Cancer Network : JNCCN, 11(4), 395–407. https://doi.org/10.6004/jnccn.2013.0055

Cummins, K. A., Russell, G. B., Votanopoulos, K. I., Shen, P., Stewart, J. H., & Levine, E. A. (2016). Peritoneal dissemination from high-grade appendiceal cancer treated with cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC). Journal of gastrointestinal oncology, 7(1), 3–9. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4754307/pdf/jgo-07-01-003.pdf

Datta, N. R., Puric, E., Klingbiel, D., Gomez, S., & Bodis, S. (2016). Hyperthermia and Radiation Therapy in Locoregional Recurrent Breast Cancers: A Systematic Review and Meta-analysis. International journal of radiation oncology, biology, physics, 94(5), 1073–1087. https://doi.org/10.1016/j.ijrobp.2015.12.361

Dubé, P., Sideris, L., Law, C., Mack, L., Haase, E., Giacomantonio, C., Govindarajan, A., Krzyzanowska, M. K., Major, P., McConnell, Y., Temple, W., Younan, R., & McCart, J. A. (2015). Guidelines on the use of cytoreductive surgery and hyperthermic intraperitoneal chemotherapy in patients with peritoneal surface malignancy arising from colorectal or appendiceal neoplasms. Current oncology (Toronto, Ont.), 22(2), e100–e112. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4399618/

Engin, K., Leeper, D. B., Tupchong, L., Waterman, F. M., & Mansfield, C. M. (1993). Thermoradiation therapy for superficial malignant tumors. Cancer, 72(1), 287–296. https://doi.org/10.1002/1097-0142(19930701)72:1<287::aid-cncr2820720150>3.0.co;2-l

Hayes Knowledge Center. (September 14, 2022). Health Technology Assessment: Hyperthermic Intraperitoneal Chemotherapy for Peritoneal Carcinomatosis resulting from Ovarian Cancer.

Hayes Knowledge Center. (January 27, 2023). Health Technology Assessment: Hyperthermic Intraperitoneal Chemotherapy for Peritoneal Carcinomatosis resulting from Peritoneal Mesothelioma.

Levine, E. A., Stewart, J. H., 4th, Shen, P., Russell, G. B., Loggie, B. L., & Votanopoulos, K. I. (2014). Intraperitoneal chemotherapy for peritoneal surface malignancy: experience with 1,000 patients. Journal of the American College of Surgeons, 218(4), 573–585. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3965636/

Mirnezami, R., Moran, B. J., Harvey, K., Cecil, T., Chandrakumaran, K., Carr, N., Mohamed, F., & Mirnezami, A. H. (2014). Cytoreductive surgery and intraperitoneal chemotherapy for colorectal

peritoneal metastases. World journal of gastroenterology, 20(38), 14018–14032. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4194588/

Mirnezami, R., Mehta, A. M., Chandrakumaran, K., Cecil, T., Moran, B. J., Carr, N., Verwaal, V. J., Mohamed, F., & Mirnezami, A. H. (2014). Cytoreductive surgery in combination with hyperthermic intraperitoneal chemotherapy improves survival in patients with colorectal peritoneal metastases compared with systemic chemotherapy alone. British journal of cancer, 111(8), 1500–1508. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4200082/

Randle, R. W., Doud, A. N., Levine, E. A., Clark, C. J., Swett, K. R., Shen, P., Stewart, J. H., & Votanopoulos, K. I. (2015). Peritoneal surface disease with synchronous hepatic involvement treated with Cytoreductive Surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC). Annals of surgical oncology, 22(5), 1634–1638. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4329114/

Refaat, T., Sachdev, S., Sathiaseelan, V., Helenowski, I., Abdelmoneim, S., Pierce, M. C., Woloschak, G., Small, W., Jr, Mittal, B., & Kiel, K. D. (2015). Hyperthermia and radiation therapy for locally advanced or recurrent breast cancer. Breast (Edinburgh, Scotland), 24(4), 418–425. https://doi.org/10.1016/j.breast.2015.03.008

Spiliotis, J. D., Halkia, E., Boumis, V. A., Vassiliadou, D. T., Pagoulatou, A., & Efstathiou, E. (2014). Cytoreductive surgery and HIPEC for peritoneal carcinomatosis in the elderly. International journal of surgical oncology, 2014, 987475. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4009200/

Treatment for cancer. National Cancer Institute. (2023). https://www.cancer.gov/about-cancer/treatment

The Health Evidence Review Commission (HERC) Prioritized List of Health Services https://www.oregon.gov/oha/HSD/OHP/Pages/Prioritized-List.aspx

Oregon Administrative Rules (OARs). Oregon Health Authority. Health Systems: Medical Assistance Programs – Chapter 410 https://secure.sos.state.or.us/oard/displayChapterRules.action?selectedChapter=87

Related Policies

Clinical Criteria Used in UM Decisions

Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)

Unlisted and Unspecified Procedure Codes

Appendix

Policy Number:

Effective: 7/1/2020 **Next review:** 7/1/2026

Policy type: Enterprise

Author(s): [Authors]

Depts: Health Services

Applicable regulation(s): OARs 410-120-1200, 410-141-3820, 410-141-3825, 410-151-0000 through 0003

Commercial OPs: 6/2025

Government OPs: 6/2025